

# NOTES FROM THE ROYAL BOTANIC GARDEN EDINBURGH

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## MATERIALS FOR A FLORA OF TURKEY: XIII.: *Silene* L.

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THE following new taxa and combinations are the result of the revision of the genus *Silene* for the Flora of Turkey. Essentially they represent additions and minor amendments to Chowdhuri's revision of the genus (in Notes R. B. G. Edinb. 22: 221-278, 1957). Figures of the calyces of some of the new species will appear in Volume 2 of the Flora.

### Sect. *Sclerocalycinae*

*S. armena* Boiss. var. *serrulata* (Boiss.) Coode & Cullen, **comb. nov.**

Syn.: *S. serrulata* Boiss., Fl. Or. 1: 643 (1867).

*S. armena* is a widespread and variable species in Turkey. The only character distinguishing *S. serrulata* from it is the punctate-rugose surface of the calyx between the nerves. This seems insufficient for the recognition of a separate species.

*S. cartilaginea* Hub.-Mor., **sp. nov.**

Planta perennis, 50-60 cm alta, glauca glaberrima, basi suffrutescens. *Caudex* ramosus. *Caules* erecti foliosi teretes, in regione inflorescentiae ramosi, nodis incrassatis, internodiis superioribus 6-10 cm longis. *Folia* basalia parva, sub anthesi emarcida; folia caulina inferiora et media oblanceolata, 4-5 cm longa, 7-12(-16) mm lata, acuta vel acutissima, basi sensim in petiolum brevem attenuata, brevissime vaginato-connata, crassiuscula subcoriacea cartilagineo-marginata, sparse indistincte serrulato-papillosa. *Folia* superiora sensim decrescentia, lineari-lanceolata vel linearia. *Inflorescentia* 4-10 flora, subcymose paniculata, ramis erecto-patentibus paucifloris. *Bracteae* lanceolato-lineares vel lineares, 7-30 mm longae. *Bracteolae* 2-3 mm longae, lanceolatae membranaceae ciliatae. *Pedicelli* 1-10 cm longi; flores centrales longe et laterales breviter pedicellati. *Calyx* 15-17 mm longus, 4 mm diam., tubuloso-clavatus coriaceus 10-nervius, basi annulo circulare pseudombilicatus, dentes calycini 1.5-2.5 mm longi, 2-2.5 mm lati, late triangulari vel late ovati albomarginati minute ciliati, alternatim obtusiusculi

et obtusissimi. *Petala* 15 mm longa, unguis 9 mm longis, lamina 6 mm longa obovato-cuneata, usque ad medium bipartita, supra albida subtus rubro-viridia; ligulae binae 0.7 mm longae. *Capsula* oblonga 10 mm longa 3 mm diam. *Semina* brunnea 1 mm longa compressa.

TURKEY: Prov. Van, Distr. Gürpınar, Çuh Gedigi, Pass zwischen Hoşap und Başkale, Artemisia-Steppe am Nordwest-Hang, Conglomerat, 2150–2200 m, 9 VII 1951, *Huber-Morath* 11169 (holo. Hb. Hub.-Mor.). Prov. Hakâri, Cilo Dağ between Cilo Yaylâ and Diz Dere, 2600 m, *Davis* 24252.

Very similar to *S. sclerophylla* Chowd. The two species can be distinguished as follows:

	<i>S. sclerophylla</i> :	<i>S. cartilaginea</i> :
Calyx:	22–29 mm	15–17 mm
Calyx teeth:	2.8–3.3 × 2.3–2.8 mm	1.5–2.5 × 2–2.5 mm
Petals:	2–2.3 cm, pink	1.5 cm, white above greenish beneath
Anthophore:	15–20 mm	5 mm

#### Sect. *Spergulifoliae*

##### *S. surculosa* Hub.-Mor., sp. nov.

Planta perennis, decumbens vel adscendens. *Caudex* gracilis ramosus, surculis foliiferis ± longis et caulibus floriferis numerosis edens. *Caules* adscenderet-erecti glabri vel praecipue superne modice papilloso-ciliati, 10–20 cm longi, simplices vel parce breviter ramosi, modice foliati. *Folia* omnia parva, uninervia glabra subcarnosa, ad marginem papilloso-ciliata, oblanceolato-spathulata, sensim in petiolum attenuata, basi vaginato-connata, apice mucronata; lamina 4–7 × 2–5 mm longa lata, petiolus 2–5 mm longus. *Folia* caulina ad nodos inferiores semper fasciculata. *Inflorescentia* ± congesta, 3–7-flora, cymose paniculata. *Bractae* ovatae vel lanceolatae, breviter acuminatae, ciliatae, 2–4 mm longae. *Bracteolae* minutae, longe ciliatae. *Pedicelli* ciliati, 2–10 mm longi. *Calyx* 9–10 mm longus, tubuloso-clavatus, tenuiter membranaceus pallidus vel rubro-suffusus, 10-nervius, superne sensim paulo ampliatus, dense glanduloso-pilosus; dentes calycini late lanceolati obtusiusculi ca. 2 mm longi. *Petala* alba, lineari-cuneata, 12–13 mm longa, lamina exauriculata profunde bifida, ungues petalorum ciliati, ligulae minutae glabrae. *Stamina* glabra. *Capsula* ovata 5 mm longa, carpophorum 2.5 mm longum. *Semina* ca. 0.8 mm brunnea granulata, dorso canaliculata faciebus concava.

TURKEY: Prov. Tunceli: Distr. Pülümür, Pass Pülümür-Mutu, Serpentschutt 8 km ob Pülümür, 1760 m, 26 VI 1951, *Huber-Morath* 11170 (holo. Hb. Hub.-Mor); above Pülümür, 1850 m, *Davis* 29289.

A very distinct relict species without near allies, remarkable within the Section for its large, petiolate leaves.

##### *S. sangaria* Coode & Cullen, sp. nov.

A *S. supina* Bieb. caulibus diffusis procumbentibusque, foliis late obovatis, ± carnosius, inflorescentiis multifloris, calycibus in fructu sub capsulis non arcte constrictis.

*Herba* perennis, caulibus. diffusis procumbentibus retrorse puberulis. *Folia inferiora* obovata ad spathulata, mucronata, mox marcescentia, crispe puberula, 6-7 × 3 mm. *Folia superiora* anguste obovata; omnia ± carnosa. *Dichasia* composita, multiflora, caulibus erectis 10-15 cm suffulta. *Bractee* lanceolatae, 7-8 mm; bracteolae anguste lanceolatae, 3-4 mm. *Calyces* 10-nervi, crispe puberulentes atque viscidi; dentes 2 mm. *Calyx* in fructu infra capsulam non arcte constrictus. *Anthophorum* c. 5 mm in flore fructuque. *Petala* crenea, extra flavida, 11 mm, lamina profunde bilobata, lobis c. 2 mm latis; squamulae petali 2. *Capsula* ovoidea, c. 7 mm, in calyce inclusa. *Semina* pallide brunnea, reniformia, sparsim tuberculata, 1-1.1 × 0.7 mm.

TURKEY A3 Sakarya: Karasu, near sea level, sand dunes, 7 viii 1962, Davis & Coode (D 39151—holo. E).

Sect. *Succulentae*

*S. salsuginea* Hub.-Mor., sp. nov.

Planta (ex unico specimine incompleto descripta) perennis adscenderet erecta ca. 30 cm alta, basi suffrutescens. *Caudex* crassus ramosus, surculis foliiferis et caulibus floriferis numerosis edens. *Caules* demum ± indurati, modice foliosi, dense retrorse papilloso-puberuli. *Folia* glauca crassa carnosa, uninervia, oblanceolato-spathulata, breviter indistincte petiolata vel subsessilia, apice mucronata, basi vaginato-connata ciliata; folia basalia emarcida, folia inferiora in axillis fasciculata, 5-15 mm longa 2-4 mm lata, omnia ± subtriquetra canaliculata; folia superiora minora opposita. *Inflorescentia* probabiliter congesta pauciflora, cymose paniculata. *Bractee* parvae lanceolatae acutae, basin versus albo-marginatae et longe ciliatae. *Bracteolae* similes sed minores. *Pedicelli* 2-10 mm longi dense papilloso-pilosi. *Calyx* 7-9 mm longus, florifer tubuloso-clavatus, fructifer valde clavato-incrassatus, 10-nervi, dense crispule pilosus; dentibus calycini hyaline marginati obtusiusculi. *Petala* alba 8-10 mm longa, lamina minuta 1.5 mm longa cuneata bifida exauriculata, coronula minima glabra, ungues petalorum glabri. *Stamina* glabra. *Capsula* ovata breviter acuminata, 6-7 mm longa 4-5 mm lata, multiovulata; carpophorum 2 mm longum. *Semina* usque ad 1.5 mm diametro, reniformia dorso breviter canaliculata faciebus plana seriatim obtuse tuberculata.

TURKEY: Prov. Konya, Dondurma Köy am Tuz Gölü, ausgetrockneter Salzumpf mit Juncetum, 900 m, 1 VIII 1952, Birand & Kasaplıgil 734 (holo. in Hb. Hub.-Mor.).

A very distinct halophile relict species without near allies.

Sect. *Inflatae*

*S. vulgaris* (Moench) Garcke var. *commutata* Coode & Cullen, stat. nov.

Syn.: *S. commutata* Guss., Fl. Sic. Prodr. 1: 499 (1824).

var. *macrocarpa* (Turrill) Coode & Cullen, stat. nov.

Syn.: *S. vulgaris* subsp. *macrocarpa* Turrill in Hook. Ic. Pl. 36: t. 3551 (1956).

*S. vulgaris* is a very polymorphic species, often divided into subspecies.

The infraspecific taxa, however, are not very distinct geographically, and we prefer to treat those occurring in Turkey as varieties.

Sect. *Brachypodae*

*S. inclinata* Hub.-Mor., sp. nov.

Planta perennis pluricaulis caespitosa, 20–40 cm alta, basi suffrutescens. *Rhizoma* crassa multiceps, residuis foliorum emarcidis imbricato-comosa, surculis foliiferis et caulibus floriferis edens. *Caules* floriferi e basi arcuata erecti tenues rigidi, simplices vel in regione inflorescentiae pauciramosi, in parte inferiore dense patule canescenti-puberuli, in parte superiore glabri. *Folia* basalia 40–70 × 5–10 mm oblanceolato-spathulata, dense patule pubescens, rosulata, in petiolum longum attenuata, apice mucronata vel mucronulata; folia caulina cito valde decrescentia, anguste oblanceolata usque lineari-spathulata; folia inflorescentiae bracteiformia. *Inflorescentia* uniflora vel 3–7-flora, dichasium laxum formans. *Bractee* virides lineari-lanceolatae albomarginatae ciliatae. *Bracteolae* similes sed minores. *Pedicelli* 3–50 mm longi, ± dense papilloso-puberuli. *Calyx* florifer anguste tubuloso-clavatus, 10–15 mm longus, basi truncato-umbonatus albomembranaceus nervis 10 viridibus percursus, modice vel sparse papilloso-puberulus eglandulosus, dentes calycini 2–3 mm longi lanceolati ± acuminati, membrana alba breviter ciliata marginati; calyx fructifer oblongus ± inclinatus. *Petala* 15–18 mm longa viridi-flavescentia bipartita, lobis oblongo-linearibus, unguibus glabris, corona lanceolato-linearia. *Stamina* glabra. *Capsula* oblonga 9–11 × 4–5 mm multiovulata, carpophorum 2–3 mm longum. *Semina* ca. 0.8 mm, obtuse vel subacute tuberculata dorso canaliculata faciebus plana.

TURKEY: Prov. Seyhan, Kalkfelsen 2 km N von Saimbeyli, 1010 m, 20 VI 1951, *Huber-Morath* 10714, *Ch.Simon* (holo. Hb. Hub.-Mor. iso. Hb. Simon). Prov. Seyhan, N.Amanus, Kalkfelsen N von Haruniye, 410 m, *Hub.-Mor.* 12438.

Closely related to *S. leptoclada* Boiss. from which it differs in its eglandular papillose-puberulent calyces and pedicels, and longer lanceolate-acuminate calyx teeth.

Sect. *Auriculatae*

*S. azirensis* Coode & Cullen, sp. nov.

A *S. brevicauli* Boiss. foliis basalibus obovatis, 10–15 × 3–4 mm, calycibus viscidissimis, pilis densis, brevibus, glandulosis obsitis differt.

*Herba* perennis, caudiculis repentibus. *Caules* floriferi plusminusve erecti, foliosi, 5–10 cm, puberulentes. *Folia* basalia obovata, 10–15 × 3–4 mm, dense velutina; folia caulina similia sed minora. *Inflorescentia* 3–5-flora plusminusve dichasialis. *Bractee* lanceolatae, c. 5 mm. *Calyces* 22–30 mm, viscidissimi, pilis densis brevibus glandulosis obsiti; dentes 2 mm. *Anthophorum* in fructu 20 mm, glabrum. *Petala* saturate rosea, 12–15 mm, lamina profunde bilobata, unguibus auriculatis. *Capsula* ovoidea, 7–10 mm, in calycibus inclusa. *Semina* brunnea, compressa, reniformia, c. 0.7 × 0.5 mm.

TURKEY B7 Erzincan: Keşiş Dağ above Cimin, 2700–2900 m, steep igneous scree, 27 vii 1957, *Davis & Hedge* (D 31621—holo. E).

**S. ruscifolia** (Hub.-Mor. & Reese) Hub.-Mor., *sp. nov.*

Syn.: *S. commelinifolia* Boiss. var. *ruscifolia* Hub.-Mor. & Reese in Feddes Rep. 52: 44 (1943); *S. commelinifolia* auct. non Boiss.

Planta perennis pumila 8–15 cm alta, dense caespitosa. *Caudex* 5–10 mm crassus ligneus, ad 20 cm longus, ramosus, residuis foliorum emarcidis tectus, ad apicem dense foliatus. *Caules* floriferi erecti robusti angulati, ad nodos incrassati, dense foliati, dense patule glanduloso-pilosi, simplices vel parce ramosi, internodiis 1–2 cm longis. *Folia* omnia dense patule glanduloso-pilosa; folia basalia in rosulam densam congesta 1–3-nervia oblanceolata vel lineari-spathulata, basi sensim in petiolum attenata, apice acuta, 20–50 mm longa 3–10 mm lata; folia caulina cito majora, late lanceolata, ovata vel late ovata, 3–7-nervia, breviter acuminata, in bracteis magnas abeuntia. *Inflorescentia* congesta, flores plerumque numerosi, in cymas ± capituliformes subdichotome dispositi. *Bractee* magnae ovatae longe acuminatae, 10–20 mm longae, 4–7 mm latae, glandulosissimae. *Bracteolae* lanceolatae ca. 10 mm longae 3 mm latae. *Pedicelli* 0.5–10 mm longi. Calyx florifer anguste tubuloso-clavatus 18–23 mm longus 3–4 mm latus, albomembraceus nervis 10 viridibus percursus, glandulosissimus, dentes calycini 5–6 mm longi lanceolato-acuminati; calyx fructifer modice inflatus. *Petala* alba 20–25 mm longa bipartita, lobis oblongo-linearibus, unguibus auriculatis glabris, corona oblongo-linearia. *Capsula* ovata seminata 10–14 × 5–6 mm, multiovulata, carpophorum 6–7 mm longum. *Semina* 1.5–2 mm, seriatim obtuse tuberculata dorso plana vel subcanaliculata faciebus plana.

TURKEY: Prov. Sivas, Sivas-Tecer, Eruptivgestein 27 km SE von Sivas, 1450 m, 17 VI 1939, *H. Reese & V. Skrivanek* (holo. in Hb. Hub.-Mor.); idem, 27. VI 1955, *Hub.-Mor.* 13146, *Ch. Simon*. Prov. Konya, Dere Köy 10 km W von Konya, Eruptivschutt, 1140 m, *Hub.-Mor.* 8450. Prov. Ankara, Beynam-Wald bei Ankara, *Karamanoğlu* 5164. Prov. Kayseri, Sopan Dağ 15 km S von Pinarbaşı, Serpentinischutt, 1590–1620 m, *Hub.-Mor.* 10719, *Ch. Simon*. Prov. Erzincan, Kalkgeröll bei Refahiye, 1540–1560 m, *Hub.-Mor.* 12435.

Without near allies in Anatolia, close to the Iranian *S. commelinifolia* Boiss. but differing from it in its dwarf compact habit and the congested many-flowered inflorescence enclosed by large bracts.

**S. oligotricha** Hub.-Mor., *sp. nov.*

Planta perennis tenuis 30–40 cm alta, basi suffrutescens. *Caudex* gracilis ramosus. *Caules* erecti teretes, inferne glabri, superne modice glanduloso-pilosi paucinodi, internodiis superioribus 4–7 cm longis. *Folia* basalia congesta linearia vel anguste lineari-lanceolata acutissima, 4–6 cm longa 1–2 mm lata, uni- vel indistincte trinervia, basin versus pilis longis curvatis multicellularibus sparse vel modice ciliata, ceterum glabra; folia caulinarum basalibus similia sed cito breviora. *Inflorescentia* laxa subracemosa 1–5-flora. *Bractee* bracteolaquae lanceolatae, dense glanduloso-pilosae necnon longe ciliatae. *Pedicelli* 0.5–4 cm longi glandulosi. *Calyx* florifer 13–17 × 3–5

mm, tubuloso-clavatus albomembranaceus nervis 10 viridibus percursus, patule glanduloso-pilosus, dentibus brevibus perlate rotundatis ca.  $2 \times 2$  mm obtusis hyaline marginatis ciliatis; calyx fructifer inflatus late oblongus. *Petala* alba 20–25 mm longa bipartita, lobis oblongo-linearibus, unguibus auriculatis glabris, corona ovata 1 mm longa. *Capsula* juvenilis elliptica  $10 \times 6$  mm, carpophorum 2–3 mm longum.

TURKEY: Prov. Tunceli, Distr. Pülümür, Passhöhe Pülümür-Mutu, alpine Trift, 1780 m, 7 VII 1959, *Huber-Morath* 15230 (holo. Hb. Hub.-Mor.).

Related to *S. eremicana* Stapf from Iran and Kurdistan, differing from it by its glabrous stems, ciliate leaves and shorter calyx with a short anthophore.

#### Sect. *Pinifoliae*

##### *S. caryophylloides* Poiret

subsp. *caryophylloides*

subsp. *eglandulosa* (Chowdh.) Coode & Cullen, **comb. nov.**

Syn.: *S. masmenaea* var. *eglandulosa* Chowdh. in Notes R.B.G. Edinb. 22: 270 (1957).

subsp. *stentoria* (Fenzl) Coode & Cullen, **comb. nov.**

Syn.: *S. stentoria* Fenzl, Pug. 9 (1842).

subsp. *subulata* (Boiss.) Coode & Cullen, **comb. nov.**

Syn.: *S. subulata* Boiss., Diagn. ser. I (1): 33 (1843).

*S. caryophylloides* var. *nardifolia* Boiss. ex Rohrb., Mon. Sil. 127 (1868).

subsp. *masmenaea* (Boiss.) Coode & Cullen, **comb. nov.**

Syn.: *S. masmenaea* Boiss., Diagn. ser. 2(5): 57 (1856).

subsp. *echinus* (Boiss. & Heldr.) Coode & Cullen, **comb. nov.**

Syn.: *S. echinus* Boiss. & Heldr. in Boiss., Diagn. ser. 2(5): 56 (1856).

Our analysis of all the available material of the above taxa has shown that they are connected by intermediates, and show geographical replacement. We have therefore recognised them as subspecies.

#### Sect. *Macranthae*

##### *S. nuncupanda* Coode & Cullen, **nom. et stat. nov.**

Syn.: *S. dianthifolia* var. *pumila* Chowdh. in Notes R.B.G. Edinb. 22: 275 (1957).

We regard *S. dianthifolia* (*sensu stricto*), which is known, as such, only from the type gathering, as synonymous with *S. armena* in Sect. *Sclerocalycinae*. The variety described by Chowdhuri appears to be a perfectly distinct species.

#### Sect. *Compactae*

##### *S. scythicina* Coode & Cullen, **sp. nov.**

A *S. armeria* L. foliis basalibus persistentibus, oblongo-oblanceolatis, foliis caulinis oblongo lanceolatis non amplexicaulibus, calyce 11–12 mm differt.

*Herba* biennis, glabra, exigue glauca. *Folia rosulantia* oblongo-oblan-  
olata, acuta, 40–60 × 5–7 mm, persistentia. *Caules* erecti, 10–20 mm. *Folia*  
*caulina* oblongo-lanceolata, acuta, non amplexicaulia. *Dichasia* composita,  
densissima, multiflora. *Bracteeae* ovato-lanceolatae. *Calyces* roseo-purpurei,  
obscuri nervosi, (10–)11–12 mm; dentes 1 mm. *Anthophorum* in flore c.  
7 mm. *Petala* rosea, integra, lamina in unguem paulatim contracta, 7–9 mm.  
*Fructus* ignotus.

TURKEY A8 Rize: Ikizdere, terraced hillsides, 700 m, 11 iv 1960, *Stainton*  
8167 (holo. E).

Sect. *Rigidulae*

*S. echinospermoides* Hub.-Mor., sp. nov.

Syn.: *S. tenuiflora* sensu Boiss., Fl. Or. Suppl. 91 (1888) non Guss.

*S. picta* sensu Stapf in Denk. Akad. Wiss. Wien, Math.-Nat. Kl.  
51: 352 (1885) & Rech. fil., op. cit. 105:170 (1943), non Pers.

*S. rigidula* sensu Barbey, Lydie, Lycie, Carie 58 (1890) non Sibth.  
& Sm.

*S. juncea* sensu Hub.-Mor. in Feddes Rep. 52:210 (1943) non  
Sibth. & Sm.

*Planta* annua 50–90 cm alta gracilis erecta rigida, inferne dense vel modice  
puberula eglandulosa, superne sparse puberula vel glabra sed ± viscida.  
*Caulis* e basi laxè divaricatim ramosus, in quarta parte inferiore foliatus,  
cum ramis superne longe nudus. *Folia* basalia rosulata oblanceolato-  
spatulata, sensim in petiolum longum attenuata, 20–50 × 5–10 mm,  
acutiuscula vel mucronata ± dense puberula; folia caulina cito minora  
lineari-lanceolata vel linearia, acuta vel acuminata. *Inflorescentia* laxa  
multiflora, flores irregulariter subdichotome dispositi. *Bracteeae* bracteolaeque  
lanceolatae acutae ciliatae. *Pedicelli* glabri 5–15 mm. *Calyx* florifer 10–15 ×  
2–3 mm tubuloso-clavatus albomembranaceus glaberrimus, nervis 10  
rubris superne anastomosantibus percursus, dentibus 1.5–2 mm triangularibus  
acutis hyaline marginatis ciliatis; calyx fructifer infra capsulam constrictus.  
*Petala* alba 15–20 mm longa, lamina profunde bifida c. 5 mm longa subtus  
rubro-venosa, lobis oblongo-linearibus divaricatis, coronula oblonga  
integra vel indistincte denticulata. *Capsula* carpophorum aequans, ovata  
multiovulata 7–8 × 4–6 mm. *Semina* 1–1.2 mm argute tuberculato-echinata,  
dorso quadriseriatim echinulata faciebus plana.

TURKEY: Prov. Antalya, Distr. Finike, Finike-Elmali, Schlucht beim  
Aykirça Kahve am S.Fuss des Bey Dağ, 36 km N von Finike, 600–650 m,  
25 VI 1948, *Huber-Morath* 9373 (holo. Hb. Hub.-Mor.); *ibid.* 28 V 1950,  
Hub.-Mor. 9632; ad pedem rupium inter Vinica (Finike) et Elmalu Lyciae,  
900 m, *Pichler* 112; Lycia, ad Gölbaschi (Gölbaşı), *Luschan*; ad Gürlek,  
*Luschan*. Prov. Muğla, Kale-Muğla, Pinetum 35 km S von Kale, *Hub.-Mor.*  
5141; Kalkfelsen 3 km E ob Muğla, 800 m, *Hub.-Mor.* 12280; Fethiye-  
Dirmil, Pinetum 51 km N von Fethiye, 1000 m, *Hub.-Mor.* 5142.

ISLANDS: Rodhos, in monte Prophet Elias prope Salakos, 600 m, *Rech. fil.*  
7156; in collibus lapidosis ad Embona, 400 m, *Rech. fil.* 7275; Montes



Akramiti, in saxosis calc. ad Siana, *Rech.fil.* 7432; in saxosis calc. montis Hag. Elias prope Archangelos, 400 m, *Rech.fil.* 8425.

Nearest to the Greek *S. echinosperma* Boiss. et Heldr., but with entire or indistinctly denticulate, not deeply incised coronal scales.

#### Sect. *Atocion*

*S. aegyptiaca* (L.) L. fil. subsp. *ruderalis* Coode & Cullen **subsp. nov.**

A subsp. *aegyptiaca* caulibus diffusis ascendentibus, calycibus in statu florendi inflatis differt.

TURKEY C8 Mardin: 4 km E of Mardin, 1200 m, sunny limestone rocks, annual, flowers pink, 25 v 1957, *Davis & Hedge* (D 28573—holo. E).

This new subspecies is quite common in SE Turkey (Mesopotamia), and is also known from N Iraq.

*S. delicatula* Boiss. subsp. *pisidica* Coode & Cullen, **subsp. nov.**

A subsp. *delicatula* indumento caulis e pilis solum brevibus glandulosis composito differt.

TURKEY C3 Antalya: d. Gebiz (Pisidia), N side of Bozburun Dağ, 25 vii 1949, *Davis* 15672 (holo. E).

Known only from the locus classicus. The stem indumentum in subsp. *pisidica* consists of short, eglandular hairs only; in subsp. *delicatula*, longer, multicellular, eglandular hairs occur as well as the shorter glandular hairs.

#### Sect. *Leiocalycinae*

*S. squamigera* Boiss. subsp. *vesiculifera* (Gay ex Boiss.) Coode & Cullen, **comb. nov.**

Syn.: *S. vesiculifera* Gay ex Boiss., *Fl. Or.* 1: 586 (1867).

Subsp. *vesiculifera* replaces subsp. *squamigera* along the south coast of Turkey east of Mut. The two taxa are very similar, differing only in the minor details of leaf shape and indumentum, characters which sometimes break down.

#### Sect. *Dichotomae*

*S. dichotoma* Ehrh. subsp. *euxina* (Rupr.) Coode & Cullen, **comb. nov.**

Syn.: *S. euxina* Rupr., *Fl. Cauc.* 184 (1869).

*S. euxina* is the name which has been applied to the pink-flowered, narrow-leaved race of *S. dichotoma* which occurs on the Black Sea coast of Turkey. The characters mentioned, however, are not strongly correlated, and subspecies appears to be the appropriate rank for the taxon.

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